

California Education and the Environment Initiative

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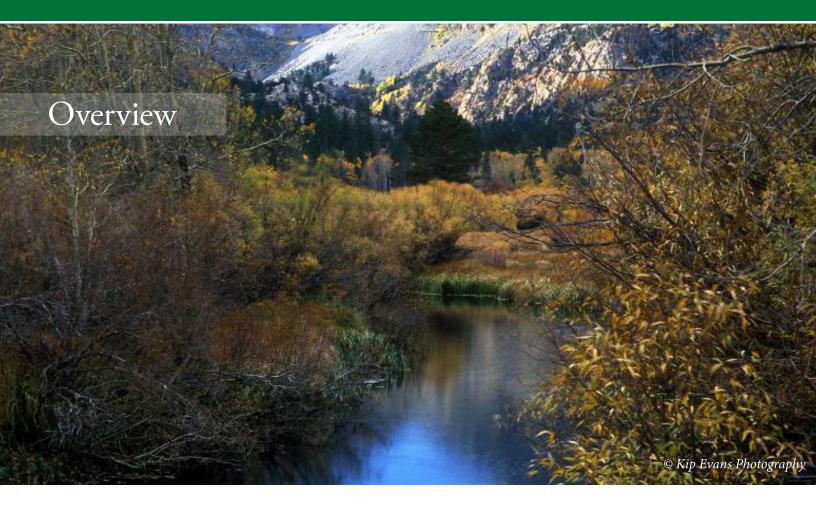
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n kindergarten, students come to know that Earth is made up of land, air, and water; more specifically, they learn the characteristics of mountains, rivers, oceans, valleys, and deserts—five ecosystems in California—and relate the landforms they see in their local environment to these five ecosystems. A unique feature of this unit is the extension of students' thinking about these ecosystems

to develop understanding of how humans depend on the goods and services provided by ecosystems.

Lessons in the unit are sequenced around the flow of water from mountain streams and rivers, through the valleys, and into the ocean. Students also discover that water is found in ponds and lakes and in aquifers in the desert. Through these lessons, they learn that water is a common and

essential component of each ecosystem critical to humans. This understanding also helps students see that different ecosystems are connected in a larger system.

Making these connections among the ecosystems involves identifying connectors—such other components of ecosystems as animals, plants, and minerals—that help define these systems. Students encounter

At a Glance



E Is for Earth Read The World Around Me and explore the Earth's major ecosystems.



R Is for River Discover where and how rivers flow in California.



M Is for Mountain Investigate mountain ecosystems and what lives there.



California Content Standard

K.3. Earth is composed of land, air, and water.

K.3.a. Students know characteristics of mountains, rivers, oceans, valleys, deserts, and local landforms.

several organisms from each of the ecosystems and discuss how they help connect the parts of the system. Concept mapping is used throughout the unit to illustrate the connections among the parts of each ecosystem, connections among the ecosystems themselves, and humans' dependence

on the resources obtained from these

ecosystems.

Individual lessons help students understand that goods produced by natural systems (water, food, materials for shelter, and so on) are essential to human life and to the functioning of our economies and cultures. Students also learn that humans depend on the services provided by natural systems, including the flow of water through different ecosystems. While the relationship between people and ecosystems is more complex than

California Environmental Principle I

The continuation and health of individual human lives and of human communities and societies depend on the health of the natural systems that provide essential goods and ecosystem services.

Concept A: Students need to know that the goods produced by natural systems are essential to human life and to the functioning of our economies and cultures.

Concept B: Students need to know that the ecosystem services provided by natural systems are essential to human life and to the functioning of our economies and cultures.

reliance on natural features, kindergarteners are cognitively ready for understanding many aspects of the human/environment relationship.

Lessons in this unit also support students' study of specific English-Language Arts (ELA) standards in the areas of reading, writing, use of language conventions, and listening and speaking. Activities supporting

these English-Language Arts standards include sharing of *The World* **Around Me** big book, developing individual student books, using letters and phonetically spelled words to complete the books and activities, and participating in oral discussions about objects and events that affect the students' daily lives, related to the ecosystems in California.



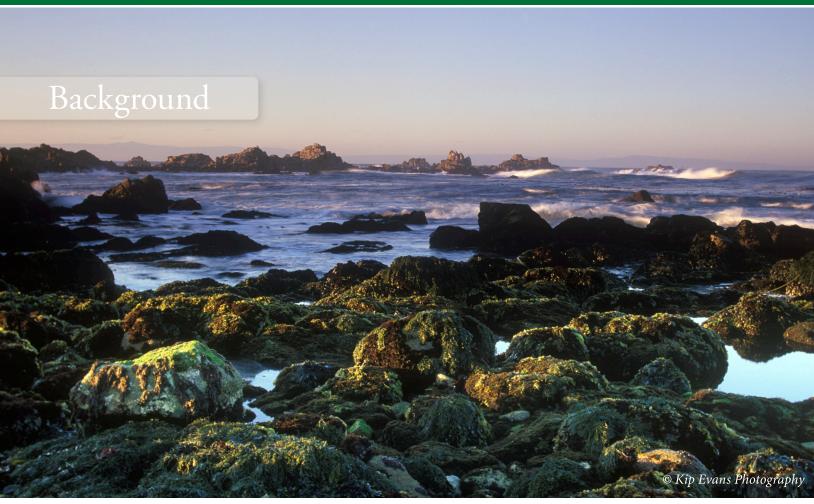
V Is for Valley Identify a valley ecosystem and what resources it provides.



D Is for Desert Investigate the challenges faced by desert plants and animals.



O Is for Ocean Examine a California map and identify where rivers enter the Pacific Ocean.



Caption to come

Earth is composed of land, air, and water. These states of matter—the gases, liquid, and solids on Earth—have interacted and interrelated in a multitude of ways over eons to form the mountains, rivers, oceans, valleys, and deserts that comprise various parts of the world.

The organisms that inhabit those areas also play a part in defining the mountains, rivers, oceans, valleys, and deserts. Their very survival depends upon the characteristics of the land, air, and water in those areas, but their existence has become part of the fabric of what makes those places separate and distinct parts of Earth.

As living organisms, people have certain basic needs that must be met in order to survive. Goods and services from the natural world provide the resources to meet these needs. People are thus dependent on natural systems; they cannot survive without the goods and services these systems provide.

A **system** is a group of interacting elements forming a complex whole. The human body is an example of a living system, a washing machine a system that is not living. Systems are made up of parts that are interconnected to allow the whole to function. If one part ceases to function or functions poorly, the entire system suffers. The same concept applies to natural systems and ecosystems. A natural system is a system formed entirely by natural processes, such as the interaction of ecological communities with chemical and physical environments. For example, the surroundings in which a living thing exists include the type of soil, the shape of the land, the

amount of water and warmth, and the plants and animals that share the same space. These surroundings affect the way the organism goes about its daily life.

Ecosystems are made up of interacting, interrelated, or interdependent ecological communities, species, and nonliving elements such as soil, water, and air. An ecological community is a grouping of different species regularly found in the same location and often named for the dominant and most abundant species (sycamore woodland) or type of environment (rocky, intertidal environment). While species in a given community are intricately interrelated, not all species

directly interact. Mangrove swamps, the Great Plains, and the Amazon rain forest are examples of ecosystems made up of a multitude of ecological communities.

Humans benefit from both goods and services obtained from ecosystems. These goods and services are, in fact, essential to human life and to the functioning of human economies and cultures. Ecosystem goods are tangible materials produced by natural systems and used by humans to fulfill their needs and support their quality of life. Ecosystem goods include materials humans use for food, fiber, fuel, and pharmaceutical and industrial products. Different ecosystems yield different goods. All natural systems—aquatic, terrestrial, coastal, or marine—provide human communities with food, energy, clean air, building products, fiber, industrial products and their component parts, pharmaceuticals, genetic resources, and recreational resources. Goods provided by freshwater aquatic systems include: the water we drink, wash, bathe, and irrigate with; and use to produce many materials and, goods on which our economies and cultures rely. Coastal and marine systems are very influential on our climates—their waters absorb the sun's energy and the movement of these

waters influences the weather patterns that have determined human settlement on Earth since the beginning of human history.

Like climate, many of the functions and processes that take place in natural systems result in services essential to human life and the functioning of our economies and cultures. Flood control and the generation of new soil are two examples of ecosystem services.

While there is considerable overlap, different ecosystems provide different types of ecosystem services. Services provided by terrestrial (land) systems include oxygen production upon which human respiration depends; protection from ultraviolet radiation by stratospheric ozone; the cycling and movement of nutrients; pollination of crops and natural vegetation; and dispersal of seeds that influence food production. Ecosystem services provided by freshwater systems include oxygen production by tiny organisms; the productivity of spawning and nursery grounds upon which fisheries depend; the capacity of wetlands to detoxify waste; and the cycling and movement of nutrients through waterways which enhance soil fertility and resultant agricultural productivity. Services provided by coastal and marine systems include



Glossary

Characteristic: A feature or quality that distinguishes individuals or items within a group.

Ecological community: A grouping of different species found in the same location (e.g., sycamore woodland).

Ecosystem: Groups of interacting and/or interdependent biotic and abiotic components and factors in a specific area.

Ecosystem goods: Tangible materials produced by natural systems that are essential to human life, economies, and cultures.

Ecosystem services: Functions and processes in natural systems that are essential to human life, economies, and cultures.

Habitat: The place where an organism lives and meets its needs.

Natural system: The interacting and/ or interdependent components, processes, cycles, and interactions among organisms and their habitats.

Organism: A living plant, animal or other life form capable of metabolic activity and reproduction.

System: A group of interacting elements such as organs that form a complex whole.

Systems thinking: Examination of the interactions of the components and processes that comprise natural and social systems.





oxygen production and mitigation of loss and damage from flooding by absorption.

Studying natural systems can be challenging. An ecosystem is as large or as small as the boundary that describes it—all that is needed is a group of interacting, interrelated, and/or interdependent components and factors. The Amazon rain forest and the local park are both natural systems, although at different scales.

In examining natural systems, a logical first step is identifying habitats. A habitat is the place where an organism lives and meets its needs. Habitats are sometimes mistakenly thought of as the "homes" for living things; this definition limits habitat

to an animal's nest

or the place

where it

sleeps

and/or bears its young. While an animal's nest is part of its habitat, it is not the entire habitat. Habitats are places where animals and plants carry out all the necessary actions they need to in order to live: these places must provide the food, water, and shelter living things need to stay alive. Depending on the organism, a habitat may be small (a pile of decaying leaves to an earthworm) or large (an entire forest to a bear). Like natural systems, many smaller habitats exist within larger habitats, as in a forest or mountain range. Some organisms need only a small area in a forest or mountain range to meet their needs; others need acres and acres of the forest or part of a mountain range to carry out the functions they need in order to

> survive. The "connectivity" in any natural system, large or small, is

amazingly intricate. A tree is an example of a simple ecosystem. A community living in this ecosystem often includes insects, snails, moss, fungi, plus the birds and mammals that nest or roost in the tree from time to time. Habitat for timber beetles includes the maze of tunnels they create under the bark of the tree. In this habitat, the beetles find the food, water, and the shelter they need to stay alive. Here they also lay their eggs, which hatch into grubs. The grubs feed on

fungi living in the same ecosystem. The fungi, in turn, feed on the soft wood inside the tree. Meanwhile, the tree is: constantly using resources from the ecosystem surrounding it (air, water, nutrients in the soil. sunlight) to survive and grow; and, providing branches for birds to roost on, and food for birds and mammals to eat. This example illustrates a simple slice of the complex interconnectivity and interdependence of the parts of an ecosystem. As this example illustrates, living things cannot exist in isolation—they, like people, need resources from the natural system around them to stay alive. Where these basic needs are met defines the habitat in which the organisms live and grow.

Every ecosystem is unique, shaped by factors such as climate, altitude, soil, plants, and animals. Likewise, living organisms within an ecosystem have characteristics that allow them to survive within the conditions or circumstances of that access

cumstances of that ecosystem. Desert plants, for example, are adapted to a very dry environment. Plants needing more water to survive could not live in a desert unless that environment was manipulated to provide the necessary water. Human communities have developed technology to allow people and other organisms to survive and grow in environments that typically would not support them. Irrigation represents one such technology. While irrigation is helpful for growing crops and some other types of plants (grass and shade trees, for example) in the desert, it influences parts of the desert ecosystem. Because the parts of the ecosystem are connected, a change to one part affects the other components and influences the functioning of the whole natural system.

Many ecosystems are delicate. A small change in one part of the system can create an imbalance throughout the entire ecosystem. The system's ability to respond to this imbalance determines whether the effect on the daily lives of humans and other living organisms relying on that system will be large or small.

The learning objectives of this unit are related to **systems thinking**. Learning about some of the plants and animals that live in California leads to identifying the relationship between the characteristics of these plants and animals and the types of

environments in which they
live. Understanding that different ecosystems (mountains, rivers, oceans, valleys, and deserts)
have interconnecting parts and that the ecosystems themselves influence each other lays the groundwork for seeing the connection between humans' daily lives and the natural world

around them. Humans are a part of, not separate from, the larger natural system. This is a key concept, because since the Industrial Revolution, humans have become the primary agent influencing ecosystem change. People use tangible materials (goods) from ecosystems on a daily basis and benefit from ecosystem services in a variety of ways. These goods and services do not exist as separate items on a grocery shelf. The availability of goods and services is connected to the health and existence of the natural systems from which they are obtained.

No matter where one lives in California or the world, the "big idea" that people depend on natural systems is evident simply by looking at the habitats and natural system components in the local area. All people depend on resources from the natural environment to survive each and every day. The plants and animals that are part of the ecological communities within and around our human communities interrelate and are interconnected. Tracing one resource, such

as water, from

the oceans and

deserts of Cali-

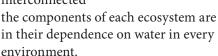
fornia allows

students to

see water

the mountains to

as a connector between ecosystems, but also illustrates how interconnected



Human communities are part of these interconnections. The conditions in a valley make it suitable for the cultivation of crops for human consumption. These conditions include flat terrain, moderate climate, and soil rich in nutrients, but water also plays an important role in growing these crops. Humans and other organisms in the ecosystems also use and depend on other materials, including rock, sand, and minerals. The organisms in the ecosystems provide a variety of food and fiber products, as well as putting oxygen, which humans need to breathe, into the air. Exploring the various ecosystems and their characteristics develops appreciation of humans' reliance on natural systems and understanding of humans' influence on the characteristics of natural

systems.



Unit Planner

	Lesson	Learning Objective(s)	At a Glance	
1	E Is for Earth	■ List different habitats (ecosystems) that are found in mountains, rivers, oceans, valleys, deserts, and in their local area.	Students discuss <i>The World Around Me</i> big book and work on individual books. Students present their ideas about different parts of an ecosystem and how they are connected in a concept map. A list of basic needs is generated.	
2	R Is for River	 List different habitats (ecosystems) that are found in mountains, rivers, oceans, valleys, deserts, and in their local area. Name some of the plants and animals that live in their local area. Identify resources (goods and ecosystem services) that people use in everyday life (e.g., food, air, water, clothing). 	Students study photo cards and a relief map of California. They participate in developing a concept map and create a "Flow of a River" diagram. They gather information to determine if their community is in a riparian area.	
3	M Is for Mountain	 List different habitats (ecosystems) that are found in mountains, rivers, oceans, valleys, deserts, and in their local area. Name some of the plants and animals that live in their local area. Identify resources (goods and ecosystem services) that people use in everyday life (e.g., food, air, water, clothing). 	Students study pictures of mountain animals and paste animal cutouts at different elevations of a mountain. They help develop a concept map about a mountain ecosystem and gather information to determine if their community is on or near a mountain.	
4	V Is for Valley	 List different habitats (ecosystems) that are found in mountains, rivers, oceans, valleys, deserts, and in their local area. Name some of the plants and animals that live in their local area. Identify resources (goods and ecosystem services) that people use in everyday life (e.g., food, air, water, clothing). 	Students define "valley" and identify why a valley is suitable for growing crops. They help develop a concept map and identify one way their daily life relates to valley resources. They gather information to determine if their school is in a valley.	



Prerequisite Knowledge	Duration (minutes)	Materials Needed	Textbook Alignment
 Students should be able to participate in a group discussion by relating comments to the discussion topic and listening to what others say. Students must be able to speak clearly enough to be understood by others. Students need to understand simple oral directions and be able to gather information from pictures. 	Preparation: 20-30 min. Instruction: 55-60 min.	Big Book: The World Around Me Dictionary: One per class Examples of valley products: Collection of fruits, nuts, and vegetables grown in the Central and Salinas Valleys (or pictures cut from supermarket ads) Plant: One per class Rock: One per class Toilet paper or paper towel tubes: One (paper towel) or two (toilet paper) per pair	To be inserted
 Students should be able to participate in a group discussion by relating comments to the discussion topic and listening to what others say. Students must be able to speak clearly enough to be understood by others. Students need to understand simple oral directions and be able to gather information from pictures. 	Preparation: 30-40 min. Instruction: 50-60 min.		
 Students should be able to participate in a group discussion by relating comments to the discussion topic and listening to what others say. Students must be able to speak clearly enough to be understood by others. Students need to understand simple oral directions and be able to gather information from pictures. 	Preparation: 10-15 min. Instruction: 55-60 min.	Class supplies: Chart paper, marker, pencils, crayons or colored pencils, glue Activity Masters: Listed with each lesson Visual Aids: Listed with each lesson	
 Students should be able to participate in a group discussion by relating comments to the discussion topic and listening to what others say. Students must be able to speak clearly enough to be understood by others. Students need to understand simple oral directions and be able to gather information from pictures. 	Preparation: 5-10 min. Instruction: 45-55 min.		

Unit Planner

	Lesson	Learning Objective(s)	At a Glance	
5	D Is for Desert	 List different habitats (ecosystems) that are found in mountains, rivers, oceans, valleys, deserts, and in their local area. Name some of the plants and animals that live in their local area. Identify resources (goods and ecosystem services) that people use in everyday life (e.g., food, air, water, clothing). 	Students identify some of the challenges plants and animals have living in a desert and discuss how their basic needs are met. They also identify some ways humans benefit from resources found in a desert. They gather information to determine if their school is in a desert.	
6	O Is for Ocean	 List different habitats (ecosystems) that are found in mountains, rivers, oceans, valleys, deserts, and in their local area. Name some of the plants and animals that live in their local area. Identify resources (goods and ecosystem services) that people use in everyday life (e.g., food, air, water, clothing). 	Students study a relief map of California to identify where rivers enter the Pacific and locate major cities. They view underwater photos, help develop a concept map, create an ocean mural, and gather information to determine whether they live near the ocean.	



Prerequisite Knowledge	Duration (minutes)	Materials Needed	Textbook Alignment
 Students should be able to participate in a group discussion by relating comments to the discussion topic and listening to what others say. Students must be able to speak clearly enough to be understood by others. Students need to understand simple oral directions and be able to gather information from pictures. 	Preparation: 5-10 min. Instruction: 50-60 min.	Big Book: The World Around Me Dictionary: One per class Examples of valley products: Collection of fruits, nuts, and vegetables grown in the Central and Salinas Valleys (or pictures cut from supermarket ads)	To be inserted
 Students should be able to participate in a group discussion by relating comments to the discussion topic and listening to what others say. Students must be able to speak clearly enough to be understood by others. Students need to understand simple oral directions and be able to gather information from pictures. 	Preparation: 30 min. Instruction: 40-45 min.	Plant On an alan	

Differentiated Instruction & Extensions

Strategies for Below-Level Readers

Provide additional guidance when asking for verbal descriptions of places and things. For example, instead of saying, "Tell me about one of the animals you see in the picture," rephrase to, "Tell me something about this toad. What color is it?" This additional structure will also help students focus and relate their responses to the topic or purpose of the conversation.

Shorten a writing task. Instead of asking students to write their names on a paper, have them fill in just the first or the first and last letters of their first names. The other parts of each student's name should be provided in advance, with underscoring where the first or first and last letters should be printed.

Provide more structure to a writing task. Instead of having a student

Strategies for Above-Level Readers

Have students compare and contrast characteristics of animals. plants, or entire ecosystems instead of just describing them. Comparing and contrasting sometimes involves focusing on multiple characteristics at once. Challenge the students to focus on behaviors as characteristics of animals, not just their physical appearances.

Assign students to explain how weather and other seasonal changes influence different parts of an eco-

system as well as the ecosystem as a whole. This challenge involves thinking about cause and effect and is more complex than simply describing how an ecosystem—or parts of an ecosystem—change through different seasons and weather conditions.

Have students describe and analyze specific weather changes and the way these changes affect living things in the environment around the school. This challenge involves observation skills as well as analysis. Have

Extension **Ideas**

Create a mural-sized collage on the classroom wall, showing the five different ecosystems studied in the unit. Label each ecosystem and have students describe some of the characteristics of each ecosystem. Students

can write a sentence about the characteristics (using invented spelling on the words not covered in the unit).

Create a simple guidebook of plants and animals for each ecosystem studied in this unit. Select plants

The World Around Me



write a letter of the alphabet independently, have a faint outline of the letter already printed. The student then traces over this outline and gains the satisfaction of printing the letter correctly.

Allow extra time to complete assigned tasks. Some students may need more time to write or draw. They may also need more time in verbally expressing a thought or providing

an oral response to a question. One way to give a student more time to formulate a verbal response is to tell the student you will be calling on him/her after you first listen to another student. Also tell students what they will be expected to explain (for example, say "Tami, it will be your turn after Tony's. I will ask you to tell us about the beaver. Do you see the beaver in the picture?")

Pre-teach some basic concepts and skills. For example, before you begin a group lesson, individually explain to a student the meaning of one or two vocabulary words. Using pictures and/or other visual cues is effective in pre-teaching a concept.

students generate a list of weatherrelated words and write them using invented spelling.

Ask for greater details as students describe or compare and contrast different animals, plants, and ecosystems. This challenge can lead to improved observational and analytical skills, as well as vocabulary development.

Give students more complex tasks. Instead of just drawing an animal in an ecosystem in which it is found,

students can show at least one way in which the ecosystem meets the animal's basic need (for example, where it goes for protection or shelter, where it gets its food).

Challenge students to write entire sentences versus having them complete sentence stems provided for them. Encourage the students to include more detail and explanations in what they write.

Provide additional print materials about the topic being studied. These

materials could include maps, informational brochures, children's books, and printouts from websites. Even if the students cannot read all the print material, they may be able to read a headline or identify individual words. They may also be able to interpret photos as well as simple charts and tables.

Give students a clipboard and pencil and have them make field notes as they study different ecosystems and parts of ecosystems.

and animals for each ecosystem and assign individual students to create pages for the selected plants and animals. Compile the class books using the pages students contribute.

Unit Assessment

Traditional Assessment

Description:

There are three parts to this assessment. Call attention to the words "Part One" (on side one), "Part Two" and "Part Three." Tell the students that they will be doing one part at a time. Lead them through the completion of one part at a time.

Instructions:

Explain Part One

Call attention to the question, "Where Could an Animal Live?" and to the photos of the five ecosystems they studied. The students should think about the habitats (where animals live) in each ecosystem. They should draw a circle around a place in (or part of) each ecosystem where an animal might live. Have them tell a partner what they circled and what animal might live there. Look at each student's work and listen to what they tell their partner. Ideally, a classroom aide or parent volunteer would be available to help with this.

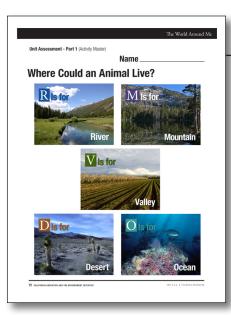
Explain Part Two

Call attention to the question "Who Lives Here?" Tell the students to think of some of the plants and animals that live in one of the ecosystems that they have just studied. Have them draw a picture of one plant and one animal that lives in one of the ecosystems.

Explain Part Three

Call attention to the question, "What Resources do I use?" Remind them that "resources" means things we use. Have the students write a list of three resources they use regularly.

Unit Assessment Instruments

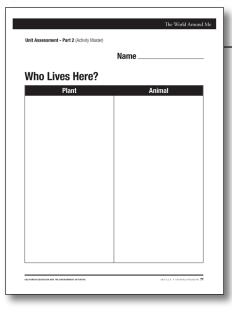


Part One:

Correct answers will vary. These answers include (but are not limited to) the following:

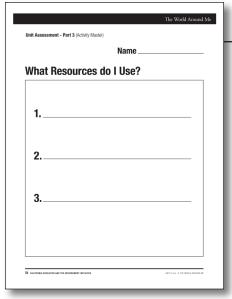
Mountain: tree, rocky ledge or cave River: rocks, mudflats, rushes, water Valley: fruit trees, tall grasses, soil **Desert:** creosote bush, rocks

Ocean: kelp, sandy shore, water



Part Two:

Answers will vary, but should represent plants and animals found in the local community



Part Three:

Answers will vary, but should represent resources students use on a regular basis. These resources may be general (water, air, food, clothes, etc.) or more specific (apples, paper, shoes, etc.).



Unit Assessment

Alternative Assessment

Description:

This unit was developed around the following learning objectives:

- List different habitats (ecosystems) that are found in mountains, rivers, oceans, valleys, deserts, and in their local area.
- Name some of the plants and animals that live in their local area.
- Identify resources (goods and ecosystem services) that people use in everyday life (e.g., food, air, water, clothing).

Information gathered through the assessments embedded in the lessons should assess mastery of Kindergarten Science Standard 3.a. To document progress in relation to these objectives, it is helpful to document performance of individual students during the lessons using an efficient and systematic process. Work samples (drawings and worksheets) can be saved, but observation notes should also be a part of the documentation process. Taking brief quick notes during class discussions should be a part of the process. Involving a classroom aide or parent volunteer in this process should be considered.

Suggested Scoring

In addition to open-ended notetaking and completion of the assessment checklists for each lesson, a summary checklist can also be used to keep track of progress in relation to the specific EEI Learning Objectives. Parts of the following checklist can be completed at the end of each lesson. Dates should be used when recording progress versus simple checkmarks.

Comments can include ideas for intervention (how to help the students make progress towards the objectives).

Unit Alternative Assessment Scoring Checklist

Student's Name		Comments
Names plants in local area	Mastered X In Progress	Named 4 local plants
Names animals in local area	X Mastered In Progress Not Demonstrated	Named 6 local animals
Identifies river habitats	Mastered X_ In Progress	Described three characteristics of river habitats
Identifies mountain habitats	_X_ Mastered In Progress Not Demonstrated	Described five characteristics of mountain habitats
Identifies valley habitats	Mastered In Progress Not Demonstrated	Identified five characteristics of valley habitats
Identifies desert habitats	Mastered In Progress Not Demonstrated	Identified one characteristic of desert habitats
Identifies ocean habitats	Mastered X_ In Progress Not Demonstrated	Identified three characteristics of ocean habitats
Identifies resources people use in everyday life	X Mastered In Progress Not Demonstrated	Identified six resources people use in everyday life

Unit Resources



Resources for Students

Baylor, Byrd. 1987. The Desert Is Theirs. Fort Worth, TX: Aladdin.

Branley, Franklyn M. 2006. Air Is All Around You. New York: Harper

Brenner, Barbara. 2004. One Small Place in a Tree. New York: HarperCollins.

Carle, Eric. 2001 (reprint). *The Tiny Seed*. Fort Worth, TX: Aladdin.

Ehlert, Lois. 1992. Planting a Rainbow. Harper's Ferry, WV: Voyager.

———. 1996. *Growing Vegetable Soup*. Northborough, MA: Sundance.

Gibbons, Gail. 1988. The Seasons of Arnold's Apple Tree. Harper's Ferry, WV: Voyager.

Good, Elaine W. 1996. That's What Happens When It's Spring! Intercourse, PA: Good Books.

Heller, Ruth. 1999. Animals Born Alive and Well. New York: Putnam.

———. 1999. Chickens Aren't the Only Ones. New York: Putnam.

———. 1999. *Plants That Never Ever Bloom*. New York: Putnam.

Hibbert, Clare. 2004. The Life of an Apple. Chicago: Raintree.

Hunt, Joyce, and Millicent Selsam. 1989. Keep Looking! New York: Simon and Schuster.

Knapp, Brian. 2001. Adapting and Surviving. Henley-on-Thames, England: Atlantic Europe Publishing.

——. 2002. *Habitats*. Henley-on-Thames, England: Atlantic Europe Publishing.

Lionni, Leo. 1983. Swimmy. New York: Knopf.

Mitgutsch, Ali. 1987. From Seed to Pear. New York: McGraw-Hill.

Pascoe, Elaine. 2003. The Ecosystem of a Garden. New York: Powerkids Press.

Pipe, Jim. 2004. Ecosystems. Barrie, Ontario: Stargazer Press.

Rockwell, Anne. 2005. Apples and Pumpkins. Fort Worth, TX: Aladdin.

Ryder, Joanne. 1992. Chipmunk Song. New York: Puffin.

———. 1996. Where Butterflies Grow. New York: Puffin.

Scheffler, Ursel. 1974. A Walk in the Rain. New York: Putnam.

Seuss, Dr. 2003 (new ed.). One Fish, Two Fish, Red Fish, Blue Fish. New York: Collins.

Tresslet, Alvin. 1988. White Snow, Bright Snow. New York: HarperTrophy.

Wildsmith, Brian. 1987. Squirrels. New York: Oxford University Press.

Wood, Audrey. 1982. Quick as a Cricket. Auburn, ME: Child's Play International.

Wright, Joan Richards. 1988. Bugs. New York: HarperTrophy.

Yabuuchi, Masayuki. 1985. Whose Baby? Daly City, CA: Philomel.

Yoshi. 1998. Who's Hiding Here? New York: Simon and Schuster.



References for Teachers

Audubon International. www.auduboninternational.org

Buzan, Tony. 2005. Mind Maps for Kids. New York: Harper Collins.

California Resources Agency. California Environmental Resources Evaluation System. State of California. http://ceres.ca.gov

Conrad, Jim. Backyard Nature. http://www.backyardnature.net

Atlas of Biodiversity, Department of Fish and Game. State of California. http://atlas.dfg.ca.gov/

Desert USA. http://www.desertusa.com

JCU Language and Learning Services. Mind Mapping. James Cook University. http://www.jcu.edu. au/studyingservices/studyskills/mindmap/howto.html

National Geographic Society. Map Machine. www.nationalgeographic.com/mapmachine

National Marine Sanctuary Program. Oceans Live. National Oceanic and Atmospheric Administration. http://oceanslive.org

National Museum of Natural History, Smithsonian Institution. http://www.mnh.si.edu

Sanctuary Web Group. Encyclopedia of the National Marine Sanctuaries. National Oceanic and Atmospheric Administration. http://marinelife.noaa.gov

Instructional Support

Agencies, institutions, and organizations throughout California have identified themselves as providing programs and materials that support this unit. Links to these resources are available at: http://www.calepa.ca.gov/Education/EEI/instructional_support.html